

REMARKS

Status of claims

Claims 1-2, 4-5 and 7-11 are pending, of which claims 1, 9 and 10 are independent.

Claim Rejection - 35 U.S.C. § 103

Claims 1, 4-5 and 9-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sakakibara et al. (US 2003/0178968) and Iwaizono et al. (USP 6,714,882). Claim 2 was rejected under 35 U.S. C. § 103(a) as being unpatentable over Sakakibara and Iwaizono as applied to claim 1, and further in view of Fasen (USP 4,609,860). Claims 7 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sakakibara and Iwaizono as applied to claim 1, and further in view of Yoshida et al. (US 2005/0106455). These rejections are traversed for at least the following reasons.

First, regarding independent claims 1, 9 and 10, Applicants submit that the alleged notification portion 44 (i.e., a display) of Sakakibara is not supplied with power by the alleged power supply 58 (i.e., batteries in battery pack 50). Sakakibara discloses a battery charger 10 and an adaptor 30 for charging the battery pack 50. As shown in FIG. 1 and 3, the adaptor 30 is attached to the charger 10 and has a display 44 (see, paragraph [0059] of Sakakibara). Further, as shown in FIGS. 1 and 2, the charger 10 has an AC input (a code) to receive AC power to operate the charger 10. In such a configuration of Sakakibara, it is clear that the adaptor 30 is also operated by the power provided through the AC input of the charger 10. Asserting that the batteries 58 to be charged with the charger and the adaptor provide power to the adaptor has technically no sense and has no merit. The power for the display 44 (i.e., the alleged notification portion) is supplied by the charger 10 and is not supplied by the batteries 58 (i.e., the alleged

power supply). In Sakakibara, it is clear that the batteries 58 are charged by the charger 10 and the adaptor 30 and do not provide power to the charger 10 or the adaptor 30. As such, Sakakibara fails to disclose that **a power supply for supplying electric power to at least the notification portion**, as recited by claims 1, 9 and 10.

Second, since the batteries 58 are not the claimed power supply, the alleged temperature detection portion 47 does not correspond to the claimed **temperature detection portion for detecting a temperature of the power supply**. It is also clear that a temperature detecting portion 28 of the charge 10 also detects the temperature of the batteries 58, which are not the claimed power supply (see, FIG. 5 and paragraph [0050] of Sakakibara).

Third, neither of Sakakibara nor Iwazono discloses that *“a forced discharge portion for recognizing an abnormality of the power supply when the temperature of the power supply detected by the temperature detection portion is not lower than the first temperature and the voltage of the power supply detected by the voltage detection portion is not lower than the first voltage when a power feed from the power supply to the portable equipment for operation of the portable equipment is off.”* The Examiner concedes that Sakakibara fails to disclose this feature. Nonetheless, the Examiner relies on Iwazono asserting that col. 7, lines 64-67, col. 8, lines 1-2 and col. 9, lines 40-44 disclose this feature. Specifically, the Examiner asserts that Iwazono discloses the power feed from the power supply to the portable equipment is interrupted. Applicants disagree.

In Iwazono, charge/discharge control section 42 controls FET 30 to interrupt charging/discharging of battery 10 (see, col. 4, line 48 to col. 5, line 7 and col. 7, lines 62-64 of Iwazono). Here, it should be noted that the FET 30 (i.e., a switch) merely interrupts charging/discharging of battery 10 by switching off the power supply from + terminal 22 to

terminal B+ 26. However, the alleged portable equipment 20 is still in operation. In other words, power supply to the alleged portable equipment for operation of the portable equipment is not off. It is clear that since operation of the alleged portable equipment 20 of Iwazono is detecting irregular status of the battery and the control circuit (see, col. 3, line 42 to col. 4, line 2 of Iwazono), the power must be continuously supplied to the controller 20 for operation. As such, it is clear that none of the cited references discloses or suggest the above identified feature of claims 1, 9 and 10.

Fourth, none of the cited references discloses or suggests that *“the control portion is further configured to make the notification portion notify a message **indicating that the abnormality has been based on the data indicating that the forced discharge is completed, when the power feed from the power supply to the portable equipment for operation of the portable equipment becomes turned on.**”* The Examiner concedes that Sakakibara fails to disclose this feature. Nonetheless, the Examiner relies on Iwazono asserting that col. 4, lines 62-63, col. 6, lines 16-19, col. 7, lines 47-50, col. 8, lines 7-19 disclose this feature. However, as set forth above, Iwazono merely discloses switching FET 30 on or off to connect or disconnect terminal 22 and terminal 26. The power supply to the alleged portable equipment 20 for operation is always on. Thus, Iwazono fails to disclose indicating a notification when the power feed from the power supply to the portable equipment for operation of the portable equipment becomes turned on (i.e., at the transition of the power status).

Fifth, Applicants also submit that none of the cited references discloses the portable equipment which is operated by the power supply from the claimed power supply [system]. In the Response to Argument section, the Examiner asserts that the battery pack of Sakakibara is used to supply power to appliances, and Iwazono teaches a load can be connected to the power

supply. However, in Sakakibara, it is clear that only the battery pack 50 is used with other appliances without the charger 10 and the adaptor 30 which include the alleged notification portion, temperature detection portion, voltage detection portion, memory portion and/or forced discharge portion. Further, even if, *arguendo*, Iwazono was combined with Sakakibara, since the Examiner relies on Iwazono only to show the alleged forced discharge portion, the combination would only modify the charger 10 and the adaptor 30 of Sakakibara, and thus the battery pack 50 of Sakakibara would still be used with other appliances without the charger 10 and the adaptor 30. Accordingly, the Examiner's assertion fails.

Sixth, Applicants submit that Sakakibara fails to disclose that the display is connected in series with the power supply as recited by claim 2. In the Response to Argument section, the Examiner asserts that the dashed line in annotated FIG. 6 of Sakakibara constitutes the series circuit. Applicants disagree. It is clear to one of ordinary skill in the art would not consider or recognize the dashed line as a series circuit of the display 44 and batteries 58. To reach the display 40 from the batteries 58, there is discharge circuit 42, which is clearly connected to the batteries 58 in parallel. Further, the discharge circuit 42 is controlled by control portion 41, which also controls display 40. It should be noted that a signal or a current flowing through the batteries 58 and discharge circuit 42 is completely different from signals provided by the control portion 41. In such a configuration, none of ordinary skill in the electrical art would consider display 40 is connected the batteries 58 in series. Accordingly, the Examiner's assertion fails.

Based on the foregoing, Applicants respectfully submit that claims 1, 9 and 10 and all claims dependent thereon are patentable over the cited references. Thus, it is requested that the Examiner withdraw the rejections of claims 1, 2, 4-5, 7 and 8 and 9-10 under 35 U.S.C. §103(a).


Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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